IN THE CLAIMS

The following is a complete listing of the claims, and replaces all earlier versions and listings.

1. - 20. (Canceled)

21. (New) An encoded data generation method executed by a client, which generates a new encoded data file based on encoded data downloaded from a server which manages JPEG 2000 encoded image data including encoded data of a plurality of tiles, encoded data of each tile having a hierarchical structure, comprising:

a request step of specifying a portion of the JPEG 2000 encoded image data based on an instruction of a target area to be decoded in an image and an instruction of a size of an output image, and of requesting the server to send the encoded data of the specified portion;

a registration step of storing, in a memory, the encoded data sent from the server in response to the request in said request step;

a generation step of generating, in the memory, management tables for managing each tile, each management table storing information indicating which hierarchy encoded data included in the encoded data of a tile has been stored in the memory and indicating an address, in the memory, of each hierarchy encoded data in the encoded data registered in said registration step;

a table updating step of updating, whenever the encoded data sent from the server is registered in the memory, the management table corresponding to the registered encoded data;

an encoded data file generation step of generating, when a management table of a tile of interest is updated in said table updating step, an independent JPEG 2000 encoded image data file of the tile of interest, wherein the independent JPEG 2000 encoded image data file has a hierarchical structure and includes the encoded data of the tile of interest registered in the memory and dummy data if the tile of interest has a lack of encoded data for completion of the hierarchical structure;

a determination step of, based on the management tables, determining whether or not there is a tile having all of hierarchy encoded data in the memory; and

a deletion step of deleting, if it is determined in said determination step that there is a tile having all of hierarchy encoded data in the memory, information of the determined tile from the management table of the determined tile;

wherein, in said request step, the request for sending encoded data of the specified portion, excluding the hierarchy encoded data having been registered in the memory, is sent to the server.

22. (New) The method according to claim 21, wherein said encoded data file generation step further includes:

if the independent JPEG 2000 encoded image data file of the tile of interest is absent in the memory, generating the independent JPEG 2000 encoded image data file of the tile of interest in the memory; and

if the independent JPEG 2000 encoded image data file of the tile of interest has already been generated in the memory, updating the independent JPEG 2000 encoded image data file of the tile of interest by replacing the dummy data in the independent JPEG 2000 encoded image data file of the tile of interest with the encoded data of the tile of interest newly registered in the memory.

23. (New) The method according to claim 21, further comprising:

a decoding step of decoding the independent JPEG 2000 encoded image data file generated in said encoded data file generation step for each tile; and

a display step of displaying an image data decoded in said decoding step.

24. (New) An encoded data generation apparatus of a client, which generates a new encoded data file based on encoded data downloaded from a server which manages JPEG 2000 encoded image data including encoded data of a plurality of tiles, encoded data of each tile having a hierarchical structure, comprising:

a request unit adapted to specify a portion of the JPEG 2000 encoded image data based on an instruction of a target area to be decoded in an image and an

instruction of a size of an output image, and adapted to request the server to send the encoded data of the specified portion;

a registration unit adapted to store, in a memory, the encoded data sent from the server in response to the request by said request unit;

a generation unit adapted to generate, in the memory, management tables for managing each tile, each management table storing information indicating which hierarchy encoded data included in the encoded data of a tile has been stored in the memory and indicating an address, in the memory, of each hierarchy encoded data in the encoded data registered by said registration unit;

a table updating unit adapted to update, whenever the encoded data sent from the server is registered in the memory, the management table corresponding to the registered encoded data;

an encoded data file generation unit adapted to generate, when a management table of a tile of interest is updated by the table updating unit, an independent JPEG 2000 encoded image data file of the tile of interest, wherein the independent JPEG 2000 encoded image data file has a hierarchical structure and includes the encoded data of the tile of interest registered in the memory and dummy data if the tile of interest has a lack of encoded data for completion of the hierarchical structure;

a determination unit adapted to, based on the management tables, determine whether or not there is a tile having all of hierarchy encoded data in the memory; and

a deletion unit adapted to delete, if it is determined by said determination unit that there is a tile having all of hierarchy encoded data in the memory, information of the determined tile from the management table of the determined tile;

wherein, the request for sending encoded data of the specified portion by the request unit, excluding the hierarchy encoded data having been registered in the memory, is sent to the server.

25. (New) A computer-readable storage medium storing a program which, when executed, performs an encoded data generation method executed by a client, which generates a new encoded data file based on encoded data downloaded from a server which manages JPEG 2000 encoded image data including encoded data of a plurality of tiles, encoded data of each tile having a hierarchical structure, the method comprising:

a request step of specifying a portion of the JPEG 2000 encoded image data based on an instruction of a target area to be decoded in an image and an instruction of a size of an output image, and of requesting the server to send the encoded data of the specified portion;

a registration step of storing, in a memory, the encoded data sent from the server in response to the request in said request step;

a generation step of generating, in the memory, management tables for managing each tile, each management table storing information indicating which hierarchy encoded data included in the encoded data of a tile has been stored in the

memory and indicating an address, in the memory, of each hierarchy encoded data in the encoded data registered in said registration step;

a table updating step of updating, whenever the encoded data sent from the server is registered in the memory, the management table corresponding to the registered encoded data;

an encoded data file generation step of generating, when a management table of a tile of interest is updated in said table updating step, an independent JPEG 2000 encoded image data file of the tile of interest, wherein the independent JPEG 2000 encoded image data file has a hierarchical structure and includes the encoded data of the tile of interest registered in the memory and dummy data if the tile of interest has a lack of encoded data for completion of the hierarchical structure;

a determination step of, based on the management tables, determining whether or not there is a tile having all of hierarchy encoded data in the memory; and

a deletion step of deleting, if it is determined in said determination step that there is a tile having all of hierarchy encoded data in the memory, information of the determined tile from the management table of the determined tile;

wherein, in said request step, the request for sending encoded data of the specified portion, excluding the hierarchy encoded data having been registered in the memory, is sent to the server.